

What is claimed is:

1 A moving picture high-speed coder that executes an inter-frame predictive coding for a moving picture, comprises:

5 vector retrieval means that detect a motion vector by a macro block unit among subject pictures that were input to find a predictive macro block with highest compression efficiency; and

compression type determination means for determining  
10 whether said macro block found in said vector retrieval means is an intra-frame coding or an inter-frame coding, wherein, when said optimum predictive vector can not be found in said compression type determination means and coding efficiency remains unchanged even though intra-  
15 frame compression and fixation was carried out for entirety of a frame, only intra-frame compression is carried out.

2 The moving picture high-speed coder according to claim 1, wherein, if number of said macro blocks one frame,  
20 which were determined as said intra-frame coding in said compression type determination means, is more than a threshold, until same determination is made again at moment of compressing a next key frame indicating said intra-frame coding, all macro blocks are compressed with  
25 said intra-frame coding.

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3 The moving picture high-speed coder according to claim  
2, wherein, only in case that number of said macro blocks  
determined continuously as said intra-frame coding in  
frames, of which number is optional but more than two,  
5 exceeded a threshold, all macro blocks are compressed with  
said intra-frame coding.

4 The moving picture high-speed coder according to claim  
1, wherein, at time of carrying out only said intra-frame  
compression, said inter-frame predictive coding is not  
10 executed to omit a reference frame preparation process.

5 The moving picture high-speed coder according to anyone  
of claim 1, wherein, in case of carrying out only said  
intra-frame compression, only when a turn came of  
compressing a key frame indicating said intra-frame coding,  
15 said predictive vector is found to determine whether or  
not only said intra-frame compression is continued.

6 A moving picture high-speed coding method that executes  
an inter-frame predictive coding for a moving picture,  
comprises steps of:

20 detecting a motion vector by a macro block unit among  
subject pictures that were input to find a predictive  
macro block with highest compression efficiency; and

determining whether its found macro block is an intra-  
frame coding or an inter-frame coding, wherein, when an  
25 optimum predictive vector can not be found at moment of

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determining said intra-frame coding or said inter-frame coding and coding efficiency remains unchanged even though intra-frame compression and fixation is carried out for entirety of a frame, only intra-frame compression is carried out.

7 The moving picture high-speed coding method according to claim 6, wherein, at moment of determining said intra-frame coding or said inter-frame coding, if number of said macro blocks a frame, which were determined as said intra-frame coding in said compression type determination means, is more than a threshold, until same determination is made again at moment of compressing a next key frame indicating said intra-frame coding, all macro blocks are compressed with said intra-frame coding.

8 The moving picture high-speed coding method according to claim 7, wherein, only in case that number of said macro blocks determined continuously as said intra-frame coding in frames, of which umber is optional but more than two, exceeded a threshold, all macro blocks are compressed with said intra-frame coding.

9 The moving picture high-speed coding method according to claim 6, wherein, in case of carrying out only said intra-frame compression, said intra-frame predictive coding is not executed to omit a reference frame preparation process.

10 The moving picture high-speed coding method according  
to claim 6, wherein, in case of carrying out only said  
intra-frame compression, only when a turn came of  
compressing a key frame indicating said intra-frame coding,  
5 said predictive vector is found to determine whether or  
not only said intra-frame compression is continued.